



Transforming High Schools

Through a Linked Learning Approach

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The Linked Learning Lens (L³)

- L³ is about preparing new teachers to teach in secondary schools that are implementing the first substantive reform in the history of secondary education--a reform that nearly a decade of research is showing has the potential to significantly reduce the dropout rate, increase the number of students prepared for the full range of postsecondary education options, and close the achievement gap. **The Linked Learning field is the context in which this reform rests.**

Brief History of High Schools

- 1826 – New legislation required free public schooling (primarily for males).
- Colleges criticized the lack of uniformity in curriculum and inability to know what prospective students had taken and accomplished.
- 1891 – National Council on Education appointed the Committee of Ten to determine **what** should be taught in high school, **when** it should be taught, and **how** it should be taught.



Conclusions from the Committee of Ten and Its Nine Subcommittees

- A commitment to ensuring that teachers are highly trained
- A rigorous academic curriculum *for all students* regardless of their future plans
- A focus on nine core academic subjects for all students: Latin, Greek, English, modern languages, mathematics, sciences (physics, astronomy, and chemistry), history (including economics and government), natural history, and geography
- Association of one discipline with another “by program and by the actual teaching”



Enter Carnegie Units

- 1906- To further create transparency to help colleges and universities make enrollment decisions, the Carnegie Foundation for the Advancement of Teaching developed the Carnegie Unit (CU) as a measure of the amount of time a student spent in class. The intent was to create a benchmark standard for the quality of education. It is interesting to note that this was a measure of *outputs*, not *outcomes*, and definitely not synonymous with learning or performance.

Fast Forward from the 19th to 21st Century - Brief Overview of Linked Learning



Linked Learning is an approach to high school transformation with the targeted goal of preparing all students for *both college and career*.



Linked Learning Pathways' Four Components

- An **academic core** meeting postsecondary admissions requirements of UC, CSU, & community colleges
- A **technical core** meeting industry standards; often providing an industry certification
 - Pathway themes that center on one or more of *California's identified 15 industry sectors*
- A coordinate, sequenced **work-based learning experience** for all students
- **Support services** — supplementary instruction, counseling, and transportation



Key Linked Learning Concepts – 3 Rs

- **Relevance and authenticity in....**
 - Teaching and learning
 - Assessments
 - Instructional strategies - with project-based learning a signature strategy
 - Connections between academics and workplace applications through the pathway theme
- **Rigor in**
 - Expectations for all students
 - Support for all students' achievement and success
- **Relationships**

Various Pathway Models Exist

- More than 500 California Partnership Academies (CPAs)
- National Academy Foundation (NAF) programs
- Another 300 career pathway programs
- Themed magnet schools, charter schools, and small schools
- Other high school programs
 - e.g., early college HS programs, High Tech Highs, Big Picture Schools, New Tech High Schools



Common Features of Linked Learning Pathways

- Tend to operate as **small learning communities**.
- **Incorporate ROP/CTE courses and community college course-taking options, as appropriate and available.**
- **Blend academic and career technical education** course content
- By design, all students are expected to complete a **rigorous academic core, a demanding technical core, and associated work-based learning activities.**
- Learning is **project-based, rigorous and relevant**, and supported by a range of services.



What credential candidates have to say....

- “Kids need to be able to make connections across their classes. The collaborative, cross-disciplinary project is the example of what LL is. In the real world, kids will be working with other people from other areas. Everything is cross-connected and kids need to be able to navigate that in their future careers.”
- “As part of the LL program, we were assigned to work with student teachers in other subject areas and with the California Technical Education Model Curriculum Standards to come up with a program, complete with lesson plans, out- comes, etc. This was a very engaging project for everyone, requiring each of us to look be- yond just our content areas, to what is reality in the business world after high school.”

More voices from Single Subject candidates....

- “I think concepts from this type of program (Linked Learning Lens) can be used at a traditionally structured school easily, just not at the scale a Linked Learning school would have it.” Another student explained, “Working with teachers across subject areas has given me a better understanding of how to incorporate more teaching strategies. These strategies are easily transferable to traditional school teaching.”

Final Candidate Voices (all excerpted from 2012 Evaluation of Linked Learning Lens Programs throughout California)

- ... teacher candidates specifically mentioned that working together to create multi- disciplinary projects helped them to form community. These group activities allowed candidates dates to “work together to develop the linked learning projects [and] gave great opportunity to develop valuable relationships with peers across different content areas,” as the projects required the teacher candidates “to communicate well when you are trying to plan and design linked learning projects and this allows for a melding of many personalities and ideas.” Further, another candidate noted that, “Constantly looking for subject matter connections in theory and planning with peers creates a greater sense of community.”



Legislation Relevant to Linked Learning

- AB 1304 - Authorizes the Commission on Teacher Credentialing to create a Recognition of Study: Linked Learning. Authored by Assembly member Marty Block and signed by the governor in August 2011.
- AB 790 - Establishes the Linked Learning Pilot Program. Authored by Assembly member Warren Furutani and sponsored by the Los Angeles Area Chamber of Commerce. The bill was signed into law by the governor last year.



Legislation, cont.

- SB 1458 – This bill, authored by Senate President Pro Tem Darrell Steinberg (D-Sacramento), expands accountability criteria for California public schools to include factors to measure college and career readiness. The bill requires that the State Superintendent of Public Instruction (SPI) submit, for approval by the State Board of Education, valid, reliable, and stable measures of college and career readiness.



More on SB 1458

- SB 1458 alters the structure of California's Academic Performance Index (API) by setting a 60% limit for standardized test performance for high schools. With the current API, standardized tests constitute 100% of the accountability measure. The remaining 40% must include graduation rates as well as other college and career readiness factors that reflect the expectations of public education and the needs of the state's workforce. Promotion rates for grades 7-12 may also be included.



Legislation, cont.

- SB 1070 - This bill extends funding for California's Career Technical Pathway Program and specifies that programs that use the Linked Learning approach to prepare students for college and career are given funding priority.



More on SB 1070

- "The passage of SB 1070 is a major step towards making access to Linked Learning a reality for all California students," said the Executive Director of the Linked Learning Alliance, Christopher Cabaldon.
- Authored by Senate President Pro Tem Darrell Steinberg (D-Sacramento), this legislation supports the growing field of Linked Learning, including the new state Linked Learning Pilot Program, and specifically calls out the state's **California Partnership Academies**, the **Linked Learning Pilot Program** (authorized under last year's AB 790), the **UC Curriculum Integration Institute**, and the Linked Learning teaching credential's **Recognition of Study** as priority funding recipients. [The key word is "priority," i.e., when monies are available.]

Linked Learning Lens

- Skills and Abilities Needed for Linked Learning Teachers
 - Overarching Goal: To prepare teachers who have the knowledge, skills, and abilities to empower all students to be successful in the full range of postsecondary options and life.





Reading the Next Four Slides

- Context for the Linked Learning Lens
 - Skills and knowledge presented from the field, i.e., pathway administrators, regarding proficiencies and knowledge needed in effective pathway teachers.
- Items in *black text* are in the Linked Learning Lens as well as in the TPEs.
- Items in *red text* represented expanded TPEs and/or areas not addressed in current credential standards.
- *Blue asterisks* begin the conversation regarding skills and proficiencies ALL Single Subject Credential candidates, beyond the current expectations.

Key Areas of Knowledge and Proficiency for Linked Learning Teachers

- **Equity – Expanded meaning in Linked Learning pathways to include pathway access and choice, and support services for all students ***
- **Diversity**
- **Intra-disciplinary and inter-disciplinary cooperation and collaboration**
- **Innovation - Expanded meaning in Linked Learning pathways to include authentic problem-solving (see CCS and NBSS)***
- **Industry and postsecondary education partnerships**
- **Focus on learning vs. focus on teaching**
- **Willingness and ability to assume leadership roles - Expanded meaning in Linked Learning pathways to include pathway coordination and grade-level team leadership ***
- **Importance of a personalized learning environment where each student is known well by adults and his/her learning needs are known and supported - Expanded meaning in Linked Learning pathways to address use of data and mentoring to ensure success for all ***



Key Areas of Knowledge and Proficiency for Linked Learning Teachers, cont.

- Teachers will demonstrate *content knowledge* related to
 - Ongoing professional learning, including **industry specific orientation**
 - Responsible, ethical, and legal conduct
 - Disciplinary academic standards
 - **The structure and goals of Career Technical Education standards**
 - Information management and technology
 - Collaborative classroom structure and operations – **Expanded meaning in Linked Learning pathways to include interactions with business partners, project-based learning, and performance assessments ***



Key Areas of Knowledge and Proficiency for Linked Learning Teachers, cont.

- Teachers will be able to design curricula that
 - **Work-based learning approaches**
 - **Career exposure and development**
 - **Reflect interdisciplinary/integrated problem- and project-based structure and content ***
 - **Meet the California “a-g” requirements with respect to course structure and content**
 - **Address state academic and CTE standards**
 - **Incorporate skills from the SCANS Report – focus on 21st Century skills –Authentic applications in Linked Learning pathways ***

Key Areas of Knowledge and Proficiency for Linked Learning Teachers, cont.

- Teachers will practice pedagogy that
 - **Incorporates industry-based applications**
 - Reflects a student-centered teaching approach
 - **Emphasizes authentic, interdisciplinary, problem-/project-based learning** (see CSS and NGSS) *
 - Includes differentiated instruction
 - Demonstrates a research-based instructional model
 - Utilizes information provided by formative and summative assessments - **Expanded meaning for Linked Learning pathways to include performance-based assessments** *
 - Enhances effective use of instructional time



Select Online Resources for Linked Learning

- America's Edge California -
<http://www.americasedge.org/what-we-support/california/>
- Career Academy Support Network -
<http://casn.berkeley.edu/>
- ConnectEd: California Center for College and Career -
www.connectedcalifornia.org
- Linked Learning Alliance -
<http://www.linkedlearning.org/>
- National Academy Foundation – www.naf.org